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FACSIMILE COVER SHEET

To: Commissioner for Patents for **Examiner Ari M. Diacou** **Group Art Unit 3663**	Facsimile No. **571/273-5591**
From: Jeanine A. Graunke Legal Assistant to Neil G. Ferrari	No. of Pages Including Cover Sheet: **6**

Enclosed herewith:

- Applicant Initiated Interview Request Form (PTOL-413A); and
- Agenda for Telephone Interview.

Re: Application Serial No. **10/696,788**
Attorney Docket No. **16569-US**

Date: March 18, 2009

Please contact us at (972) 385-8777 if you do not receive all pages indicated above or experience any difficulty in receiving this facsimile.

PTOL-413A (10-07)
Approved for use through 10/31/2007. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Applicant Initiated Interview Request Form

Application No.: 10/696,788 First Named Applicant: Han et al.
Examiner: Ari M. Diacou Art Unit: 3663 Status of Application: Office Action

Tentative Participants:
(1) Neil G. Ferrari (2) Ari M. Diacou
(3) (4)

Proposed Date of Interview: 3/23/09 or 3/24/09 **Proposed Time:** 2:00 p.m. ET **(AM/PM)**

Type of Interview Requested:
(1) ☑ Telephonic (2) ☐ Personal (3) ☐ Video Conference

Exhibit To Be Shown or Demonstrated: ☐ YES ☐ NO
If yes, provide brief description:

Issues To Be Discussed

Issues (Rej., Obj., etc)	Claims/ Fig. #s	Prior Art	Discussed	Agreed	Not Agreed
(1) See Agenda			☐	☐	☐
(2)			☐	☐	☐
(3)			☐	☐	☐
(4)			☐	☐	☐

☐ Continuation Sheet Attached

Brief Description of Arguments to be Presented:

Please see attached Agenda

An interview was conducted on the above-identified application on .

NOTE: This form should be completed by applicant and submitted to the examiner in advance of the interview (see MPEP § 713.01).

This application will not be delayed from issue because of applicant's failure to submit a written record of this interview. Therefore, applicant is advised to file a statement of the substance of this interview (37 CFR 1.133(b)) as soon as possible.

Applicant/Applicant's Representative Signature — Examiner/SPE Signature

Neil G. Ferrari
Typed/Printed Name of Applicant or Representative

61,484
Registration Number, if applicable

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Han et al.**	§	Group Art Unit: **3663**
Serial No.: **10/696,788**	§	Examiner: **Diacou, Ari M.**
Filed: **October 30, 2003**	§	Confirmation No.: **8112**
For: **Vehicular Guidance System Having Compensation for Variations in Ground Elevation**	§	Attorney Docket No.: **16569-US**

78833
PATENT TRADEMARK OFFICE
CUSTOMER NUMBER

Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

AGENDA FOR TELEPHONE INTERVIEW

Sir:

I would like to request a telephone interview on Monday or Tuesday, March 23, 2008 or March 24, 2008, at 2:00 Eastern time, or any time in the near future that is mutually convenient. Please consider the following topics for discussion.

Applicants request a copy of the Stewart reference.

Proposed Arguments:

The proposed combination of references, considered as a whole, fails to teach or suggest the feature of, "wherein each of the roll data and pitch data are separately estimated using i) a maximum slope of ground with respect to a reference point for each cell traversed by the vehicle corresponding to the particular location...and ii) an aspect angle between a direction of the maximum slope and an axis with which a direction of travel is coincident."

This cited portion of *Quincke* teaches calculating a location. Specifically, *Quincke* teaches calculating a location when traveling in the N-S direction on a slope inclined transversely

to the longitudinal direction of the equipment. However, from this equation, *Quincke* does not teach or suggest a maximum slope of the ground with respect to a reference point for each cell traversed by the vehicle corresponding to a particular location. *Quincke* is completely devoid of teaching a maximum slope of the ground. Futhermore, *Quincke* does not teach or suggest a maximum slope with respect to a reference point for each cell. The above matrix equation gives no indication as to what the symbols represent. Additionally, the matrix equations above result in three number, Xp, Yp, and Zp. Since the matrix equation results in a point on a map (X, Y, Z), this would not even allow an estimation of pitch and roll data as in claim 21. The Examiner equates β with roll data and X, Y, and Z with the reference point in claim 21. Even assuming, in *arguendo*, that the assumptions by the Examiner are true, *Quincke* would teach using the roll data to determine a reference point. *Quincke* would still not teach using the maximum slope, which is not taught in *Quincke* at all, for each cell to estimate the roll and pitch data.

Figure 7 of *Quincke* gives meaning to the symbols used in the matrix equation above. The symbol β describes the angle between the x axis and the slope of the ground where the vehicle in *Quincke* is located. *Quincke* teach away from using a maximum slope of the ground with respect to a reference point for each cell traversed by the vehicle corresponding to a particular location in estimating roll and pitch data. In *Quincke*, the symbol β is the roll angle of the vehicle in Figure 7 and not the angle of the maximum slope used to estimate roll and pitch data in claim 21.

The Examiner further states that *Quincke* "discloses alignment angle Φ which is in the N-S-E-W plane, and therefore the aspect angle Φ will be between the two directions claimed," to teach or suggest an aspect angle between a direction of the maximum slope and an axis with which a direction of travel is coincident is used in estimating pitch and roll data, as in claim 21. The angle Φ is the angle between d1 and the N-S direction. D1 is the projection of the distance from the location of the GPS antenna to the reference point. Therefore, the angle Φ in *Quincke* is the angle between the direction of the reference point and the N-S direction. Figure 2 of *Quincke* shows the angle Φ. The angle Φ in *Quincke* is not the same as the aspect angle in claim 21. The aspect angle in claim 21 is the angle between a direction of the maximum slope and an axis with which a direction of travel is coincident. Even if, in *arguendo*, the axis with which a direction of travel is coincident is the same as the N-S direction, *Quincke* teaches away from claim 21 by using the direction of the reference point as the other vector and not the direction of the

maximum slope. Furthermore, *Quincke* does not teach or suggest using this angel to estimate pitch and roll data.

The proposed combination of references, considered as a whole, fails to teach or suggest the feature of, "guiding the vehicle steering in a direction of travel with compensation data based upon at least one of the estimated roll data and the pitch data such that an actual path of the vehicle follows a target path."

The cited portion of *Quincke* teaches that a when a processing unit finds a virtual reference point, it takes into consideration a parameter of the equipment, such as speed, so that the position of the virtual reference point relative to a satellite reception unit (GPS antenna) can be regulated dynamically as a function of the parameter. When the reference point has reached the end of the field, certain operations are triggered automatically with an adjustable time lag. The certain operations could be lifting a cutterbar or lifting and turning the plow. Alternatively, in *Quincke* the parameter may be a cultivation tool mounted on the equipment to form the virtual reference point. The virtual reference point may be in each case located at the edge of a spreading range. However, the cited portion of *Quincke* is completely devoid of guiding the vehicle steering in a direction of travel with compensation data based upon at least one of the estimated roll data and the pitch data such that an actual path of the vehicle follows a target path. The cited portion of *Quincke* has nothing to do with the steering of a vehicle. In contrast, the cited portion of *Quincke* is directed towards a virtual reference point which is used in conjunction with a satellite to determine when operations need to be triggered. At best, *Quincke* is guiding the vehicle when *Quincke* determines that the plow needs to be turned, but this is not based on roll or pitch data. Additionally, *Quincke* does not teach or suggest a target path, but merely determines when an operation needs to be triggered.

The Examiner is invited to call at the below-listed telephone number to confirm or reschedule the requested telephone interview.

DATE: March 18, 2008

Respectfully submitted,

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